

REMARKS:

In the outstanding Office Action, the Examiner allowed claims 17, 18, 21 and 22, objected to claims 9-16 and rejected claims 1-3, 5-8, 19, 20 and 23-26. Claim 4 remains cancelled. No new matter is presented. Thus, claims 1-3 and 5-26 are pending and under consideration. The rejections are traversed below.

ALLOWABLE SUBJECT MATTER:

At items 7 and 8 of the outstanding Office Action, the Examiner indicated that claims 9-16 are objected to and claims 17, 18, 21 and 22 are allowed.

The rejection of claim 1, upon which claims 9-16 depend, is traversed below. Thus, claims 9-16 are allowable.

REJECTION UNDER 35 U.S.C. § 103(a):

Claims 1-3, 5-8, 19, 20 and 23-26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,972, 314 (Getzinger) and U.S. Patent No. 5,684,807 (Bianchini).

Getzinger is directed to implementing macro data flow or data stream control of data processors and using a signal processing graph process for dynamic allocation and control of resources. The macro data flow control graph defines signal processing strings in terms of flow of data from inputs to outputs, and the macro data flow control graph is translated into a linked-list structure which preserves topology of the graph such that the graph structure points to a list of node structures and lists of input and output data and trigger queues (see, col. 9, lines 11-21 and lines 39-45 and FIG. 5). That is, Getzinger is limited to a graph compiler that organizes each of the nodes in the graph for evaluation where each node's method of evaluation is fixed in the order specified by the graph connectivity and requires knowledge of the structure of the graph.

The Examiner acknowledges that Getzinger fails to disclose allowing the second dependency node to execute the algorithm and executing the algorithm as part of an evaluation of the second dependency node to implement a graphics creation process, but relies on Bianchini as teaching the same. However, Bianchini is limited to a distributed diagnostic system for a network having at least three nodes in communication with each other via the network for determining fault state of the nodes (see, Abstract, col. 2, lines 26-40 and col. 5, lines 48-60).

The Bianchini nodes require knowledge of other nodes in order to set up and run tests to determine state of the nodes (see, col. 3, line 65 through col. 4, line 14), and use a single fixed algorithm (an adaptive DSD algorithm) running within each node to determine correctness (see,

col. 6, lines 30-48). As shown in Table 1 of Bianchini, the data structure maintained at the nodes is an array of test result data (see, col. 6, lines 6-15). That is, Bianchini establishes test results via other nodes (i.e., nodes 1 through n-1) that evaluate their own algorithm and return the results to node n.

In contrast to Getzinger and Bianchini that are directed to dataflow evaluations, the present invention uses a dependency graph and passes algorithms without content limitations. As such, the structure of the present invention includes variable data types determined at evaluation time, an algorithm embedded within the structure (i.e., not just data), both input and output data within the structure, arbitrary ordering of data within the structure including a map to arrange ordering as required by the algorithm, etc.

Independent claims 1, 19, 20 and 24 recite an apparatus and method “to implement a graphics creation process”. The implementation of the graphics creation process includes, “passing a pointer to an algorithm associated with a first dependency node to a second dependency node” and “executing the algorithm as part of an evaluation of the second node” (“nodes”, “algorithms” and “pointers” in claim 20).

Independent claim 23 also recites executing an algorithm associated with a first “via the second node as part of an evaluation of the second node” and “reexecuting the algorithm via the second node each time input data of the second node changes to implement a graphics creation process”. Independent claim 19 also recites executing the algorithm as part of evaluation of the second node “each time input data of the second node changes”.

Independent claims 25 and 26 recite “a method of evaluating a dependency graph” including “passing a pointer to algorithm associated with a first dependency node to a second dependency node” and “calling the algorithm via the second dependency node and executing the algorithm as part of an evaluation of the second dependency node each time input data changes” (claim 25), where “the first algorithm is embedded in the second dependency node and executed as part of an evaluation of the second dependency node” (claim 26).

Unlike Getzinger and Bianchini, the present invention implements “a graphics creation process” using algorithms that are part of “a dependency graph” without requiring knowledge of any other nodes within the graph, allow change of inputs before or during algorithm execution, and passes a pointer to an algorithm(s) for transmitting the same through the dependency graph with a single point of evaluation (inside the self-evaluating structure).

Getzinger and Bianchini, either alone or in combination, do not teach or suggest the above-discussed features of claims 1, 19, 20 and 23-26.

It is submitted that the independent claims 1, 19, 20 and 23-26 are patentable over

Getzinger and Bianchini.

For at least the above-discussed reasons, the dependent claims depending from claim 1 are patentably distinct from the combination of Getzinger and Bianchini. The dependent claims also recite additional patentably distinguishing features. For example, claims 2 and 5 recite that "the algorithm comprises a self evaluating data structure" and "the structure comprises an algorithm calling method", respectively.

The combination of Getzinger and Bianchini does not teach or suggest a method "to implement a graphics creation process" including "executing an algorithm associated a first dependency node as part of an evaluation of the second dependency node" (claim 1 upon which claims 2 and 5 depend), where "the algorithm comprises a self evaluating data structure" and "the structure comprises an algorithm calling method", as recited in claims 2 and 5, respectively.

Therefore, withdrawal of the rejection is respectfully requested.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.


If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,
STAAS & HALSEY LLP

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